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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/032,481	01/02/2002	Yong-Seok Song	P56631	5616

7590 12/10/2003

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EXAMINER

VO, TUYET THI

ART UNIT	PAPER NUMBER
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2821

DATE MAILED: 12/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/032,481

Applicant(s)

SONG ET AL.

Examiner

Tuyet Vo

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 and 22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11,12,14-17,19 and 22 is/are allowed.
- 6) ☒ Claim(s) 1-4,8-10,13,18 and 20 is/are rejected.
- 7) ☒ Claim(s) 5-7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

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Detailed Action

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 8-10, 13, 18 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Chen (US Pat. 5,350,967).

Chen discloses an inline electron gun for a color cathode ray tube (Figs. 5-14), the gun comprising:

A cathode (32a, 32b, 32c), arranged in a horizontal line, emitting an electron beam;
a control electrode (34) having first hole regions (54), each one of the first hole regions including a first rectangular indented portion (112) (the rectangular shape inherently includes vertically/horizontally elongate figures) formed at an output side surface of the control electrode (34) and including a first hole portion (114) formed in the first indented portion (112), the electrode beam passing through the control electrode via the first hole portion, wherein the first hole portion has a circular shape with a vertical width and a horizontal width equal to each other;

a screen electrode (36) being installed adjacent to the control electrode (34), the screen electrode (36) having second hole regions (56), wherein the second hole regions having circular shape (120); and

a plurality of focusing electrodes (38, 40, 42, 44, 46) being sequentially installed from the screen electrode and respectively forming electron beam passing holes having a predetermined shape (Fig. 5), the focusing electrodes form a plurality of quadrupole lenses (col. 10, lines 57-67 and col. 11, lines 1-36).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen.

Chen discloses substantially the claim invention as noted above in that the hole portion of the first hole region being a circle instead of the first hole portion with the elongated shape having a vertical width greater than a horizontal width as claim invention, and leave the option of selecting a number of different hole's shape up to one skill in the art for particular application in order to optimum the precision of the beam focusing. Such implementation is considered as a routine skill in the art.

Allowable Subject Matter

5. Claims 11, 12, 14-17, 19 and 22 are allowed.

6. Claims 5-7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is a statement of reasons for the indication of allowable subject matter: the prior art fails to suggest each one of the second hole regions including a second indented portion formed at an output side surface of the screen electrode and a second hole portion formed in the second indented portion as required in claims 5, 11 and 22. The prior art also lacks to establish plurality of focusing electrodes installed in an order manner related to a control and screen electrodes in that a fourth/additional focus electrode and fifth/next focusing electrodes forming a first quadrupole lens and a second quadrupole lens respectively as required in claims 14 and 19.

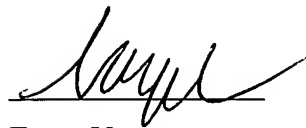
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Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuyet Vo whose telephone number is 703 306 5497. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on 703 308 4856. The fax phone number for the organization where this application or proceeding assigned is 703 872 9306 for regular communications and for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308 0956.

A handwritten signature in cursive script, appearing to read 'Tuyet Vo', is written over a horizontal line.

Tuyet Vo

December 5, 2003